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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,160	03/09/2005	Miyuki Kamoshita	P27590	5851

7055 7590 03/23/2006

GREENBLUM & BERNSTEIN, P.L.C.  
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RESTON, VA 20191

EXAMINER
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KRUER, KEVIN R

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/527,160

Applicant(s)

KAMOSHITA ET AL.

Examiner

Kevin R. Kruer

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/9/2005</u> . | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

2. The information disclosure statement filed June 9, 2005 has been fully considered. An initialed copy of said IDS is enclosed herein.

***Drawings***

3. The drawings filed March 9, 2005 are accepted.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 2001323204A (herein referred to as Shiba).

Shiba teaches a thermoplastic film excellent in water-proofness having high gas barrier properties. The film has a water insoluble layer comprising polyvinyl alcohol and an ethylene maleic acid copolymer in amounts of 97/3 to 10/90 (abstract), preferably 90/10-40/60 (0014). The maleic acid desirably has added to it 0.1-40% of alkali compounds relative to the carboxyl groups of the copolymer in order to improve the gas barrier properties of said film (0039). Such alkali compounds include alkali earth

hydroxides, herein understood to be sufficiently specific to anticipate the claimed calcium and magnesium hydroxides. Said composition is applied to a plastic film (0012).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 200202516A (herein referred to as Miyagawa) in view of JP57049431A (herein referred to as Tokyo).

Miyagawa teaches a gas barrier film comprising a plastic layer and a coating comprising polyvinyl alcohol and an olefin-maleic acid copolymer in an amount of 97/3 to 20/80 (abstract), preferably 90/10-40/60 (0015). The composition further comprises a crosslinking agent comprising 0.1-20wt% of the total of (A) and (B), as taught in paragraph (0023). The crosslinking agent is a metal complex that is at least divalent (0023).

With regards to claims 1, 5, and 7, the examiner takes the position that said teaching is sufficiently specific to anticipate the claimed amount of component (D). Alternatively, Miyagawa teaches the amount of crosslinking agent should be controlled in order to optimize the gas barrier properties and (0023). Therefore, it would have been obvious to one of ordinary skill in the art to optimize the amount of crosslinking

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agent added to the composition in order to optimize the gas barrier properties of the composition.

Miyagawa teaches that the crosslinking agent should comprise a divalent metal compound but does not explicitly teach that the crosslinking agent should comprise a magnesium oxide or calcium oxide. However, Tokyo teaches that magnesium oxide and calcium oxide are known in the art to be useful as vinyl alcohol crosslinking agents (abstract). The courts have held that it is obvious to substitute one composition for a second composition when the equivalency of the compositions is recognized in the prior art (see MPEP 2141.05). Furthermore, an express suggestion to substitute one equivalent component for another is not necessary to render such substitution obvious. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize calcium oxide or magnesium oxide as the divalent metal crosslinking agent taught in the primary reference. The motivation for doing so would have been that calcium oxide and magnesium oxide are divalent metal compounds known in the art to be useful as crosslinking agents for vinyl alcohol compositions.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP2003-131745 teaches a high barrier composition comprising PVOH, ethylene maleic anhydride, a crosslinking agent, and an inorganic layered compound. JP60-206602 teaches a gas barrier composition comprising 1-90wt% ethylene vinyl alcohol, an ethylene maleic anhydride compound, and 0.01-3wt% of an alkaline earth metal hydroxide or oxide.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R. Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin R. Kruer  
Patent Examiner-Art Unit 1773